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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,216	11/13/2003	Peter N. Gray	BTEC 9693	8452
321	7590	05/31/2005	EXAMINER	
SENNIGER POWERS LEAVITT AND ROEDEL ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			ZACHARIA, RAMSEY E	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,216

Applicant(s)

GRAY ET AL.

Examiner

Ramsey Zacharia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-68 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/22/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

2. Claims 26 and 49 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Both claims 26 and 49 limit the generated gas to sulfur dioxide. However, both claims 26 and 49 depend from claims requiring the gas to be mixture of both sulfur dioxide and chlorine dioxide. This objection may be overcome by changing the dependency of claims 26 and 49 to claims 24 and 47, respectively.

Claim Language

3. For the purpose of examination, claims 26 and 49 are taken to depend from claims 24 and 47, respectively.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4, 6-14, 16, 17, 23, 24, 26, 27, 29-37, 39, 40, 46, 47, 49, 50, 52-60, 62, 63 are rejected under 35 U.S.C. 102(b) as being anticipated by Corrigan (WO 00/03930).

Corrigan teaches a packaging film comprising a polymer blend and an antifungal agent activated by the presence of moisture (page 2, lines 1-6). In the embodiment of Example 1, the film is a single layer comprising polyethylene and 15 wt% sodium metabisulfite, a material that generates sulfur dioxide (page 4, lines 9-12). In the embodiment of Example 2 the film comprises two layers, one layer containing 12-15 wt% of sodium metabisulfite and the other layer devoid of the sodium metabisulfite (page 8, line 13-page 9, line 4).

Regarding claims 10, 11, 33, 34, 56, 57, the low density polyethylene used to form the films of Corrigan is taken to have a melt index of between about 0.5 and about 8.0 and melt temperature of between about 105 and about 150 °C, as indicated by the attached MatWeb Material Data Sheet for film grade low density polyethylene. Melt flow is reported as between 0.22 (which reads on the lower limit of about 0.5) and 6.5 and the melting point is reported as between 108-121 °C.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 15, 18, 20, 21, 38, 41, 43, 44, 61, 64, 66, and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corrigan (WO 00/03930).

Corrigan explicitly teaches all the limitations of claims 15, 20, 21, 38, 43, 44, 61, 66, and 67, as outlined above, except for the presence of the gas generating compound in both layers of the multilayer film or a three layer film wherein all layers can generate gas.

Corrigan do teach that the film may have multiple layers (page 3, lines 15-16). From this disclosure one skilled in the art would readily envisage films comprising three layers.

It would be obvious to one skilled in the art to add the gas generating material to all the layers of the film to maximize the amount of gas generated for applications in which an increased amount of gas generation is desired.

8. Claims 18, 19, 22, 41, 42, 45, 64, 65, and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corrigan (WO 00/03930) in view of Sanderson et al. (WO 03/018431).

Corrigan teaches all the limitations of claims 18, 19, 22, 41, 42, 45, 64, 65, and 68, as outlined above, except for the presence of additional specific layers. However, Corrigan do teach that the film may be used in a laminate with other layers to modify the water transmission rates.

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Sanderson et al. is directed to a sulfur dioxide gas generating device using in the packaging industry (page 1, lines 9-21). Sanderson et al. disclose that it is known to form three layer sheets comprising an inner layer of a gas producing composition and outer layers of sheets pervious to water and sulfur dioxide to control the rate at which sulfur dioxide is produced (page 2, lines 6-16).

One skilled in the art would be motivated to surround the gas generating layer of Corrigan with pervious sheets to control the rate at which sulfur dioxide is produced.

9. Claims 2, 3, 5, 25, 28, 48, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corrigan (WO 00/03930) in view of Aamodt et al. (U.S. Patent 6,325,969)

Corrigan teaches all the limitations of claims 2, 3, 5, 25, 28, 48, and 51, as outlined above, except for the addition of a second gas generating solid capable of generating and releasing chlorine dioxide. However, Corrigan does teach that any active fungicide that allows the active agent to migrate through the polymer may be used, with preference for water activated fungicides (page 3, lines 1-5).

Aamodt et al. teach that chlorine dioxide gas is useful for killing biological contaminants, such as fungi (column 2, lines 37-41). The chlorine dioxide may be formed from a composition which absorbs water from the air and releases chlorine dioxide over time (column 2, lines 42-49).

One skilled in the art would be motivated to use a combination of the gas generating solids of Corrigan and Aamodt et al. in the packaging film of Corrigan because both produce gases upon exposure to water that act as fungicides. It has been held that it is prima facie

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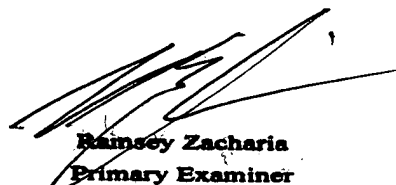
obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in the prior art. See MPEP 2144.06.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
Tech Center 1700